

ASMEX.236A



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#9
5/14/02
MW

Applicant : Raaijmakers et al.

) Group Art Unit: 1763

Appl. No. : 09/658,784

Filed : September 11, 2000

For : LOADLOCK WITH
INTEGRATED PRE-CLEAN
CHAMBER

) I hereby certify that this correspondence and all marked
) attachments are being deposited with the United States
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) addressed to: Assistant Commissioner for Patents,
) Washington, D.C. 20231, on

April 29, 2002

Gordon H. Olson, Reg. No. 20,319

Examiner : R. Zervigon

LETTER TO DRAFTPERSON UNDER M.P.E.P. § 608.02(r)

Please Enter
7/28/02 H

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir or Madam

Please consider and enter the proposed drawing amendment, which replaces the reference number "20j" with "20i" in Figures 12 and 13. This amendment is in response to an objection raised by the Examiner. The changes are indicated in red. No new matter is being added. Therefore, it is respectfully requested that the proposed drawing corrections be approved.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: April 29, 2002

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COMMENTS

In response to the Office Action mailed November 28, 2001, Applicants respectfully request the Examiner to reconsider the above-captioned application in view of the foregoing amendments and the following comments. As a result of the amendments listed above, Claims 1-61 and 63-67 are pending, Claims 23-56 have been withdrawn as directed to a non-elected invention, Claim 62 has been canceled. In this amendment, Claims 7, 63 and 64 have been amended.

The specific changes to the specification and the amended claims are shown on a separate set of pages attached hereto and entitled **VERSION WITH MARKINGS TO SHOW CHANGES MADE**, which follows the signature page of this Amendment. On this set of pages [or page], the insertions are underlined (e.g., insertions) while the deletions are in bold between brackets (e.g., [deletions]).

1. Objected to and Allowed Claims 12, 14, 22, 59, 60, 61 and 67

Applicants note with appreciation that Claims 12, 14, 59, 60 and 67 are objected to as being dependent upon a rejected base claim and that the Examiner indicated that these claims contain patentable subject matter and would be allowable if rewritten into independent form. As explained below, Applicants believe that the base claims are in condition for allowance. Therefore, at this time, Applicants have declined to convert these claims into independent form.

Claims 22 and 61 are allowed.

2. Objections to the Drawings

The drawings are objected to because reference character "20j" is used in Figures 12 and 13 while the specification refers to reference character "20i". In response to this objection, Applicants are submitting a proposed drawing amendment, which addresses this objection. This proposal by Applicant for amendment of the drawings to address informalities is embodied in: (a) a *separate letter to the Draftsperson* in accordance with M.P.E.P. § 608.02(r); and (b) proposed drawing corrections shown *in red* on copies of previously filed Figures 12 and 13 in accordance with M.P.E.P. § 608.02(v). No new matter is introduced by these proposed drawing changes.

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The drawings are also objected to because the reference character "26" has been used to designate the load lock chamber and the elevator plate. The foregoing amendment to the specification corrects this informality.

3. Claims 1-11, 13, 15-21, 57, 58 and 62-66

Claims 1-11, 13, 15-21, 57, 58 and 62-66 all stand rejected under 35. U.S.C. 103(a) as being unpatentable over Wytman (EP 0834907 A2). As set forth below, Applicants respectfully disagree with the rejections of these claims

A. Claims 1-6, 9-11 18 and 20, 21

Independent Claim 1 recites that the elevator plate includes "a wafer carrier that is adapted for receiving a plurality of wafers and is attached to said elevator plate." The Examiner states that it "would have been obvious to attach the Wytman wafer carrier to the elevator plate." The motivation for attaching the wafer carrier to the elevator plate being "to insure that the wafer carrier would not tip over during transfer between Wytman's upper chamber 12 and lower chamber 14."

Applicants respectfully submits that Wytman teaches away from such a modification. Wytman is directed to a load lock unit for transferring a wafer cassette. *See* Col. 1, lines 3-5. As shown in Figure 1 of Wytman, such cassettes are quite large and are configured to support a large number of wafers. Because of their size and weight, these cassettes do not tend to tip over and thus there is no need or motivation to attach the cassette to the elevator plate. Moreover, attaching a cassette to the elevator plate would eliminate one of the advantages of a cassette, which is that the cassette can be removed from the load lock and used to store wafers. For at least these reasons, Applicants respectfully submit that one of ordinary skill in the art at the time of the invention would not have modified Wytman as suggested by the Examiner.

Claims 2-6, 9-11, 18, 20 and 21 are also in condition for allowance because they depend from allowable Claim 1 and recite additional patentable subject matter.

B. Claims 7-8

For at least the reasons set forth in Applicants previous Amendment dated September 5, 2001, Applicants respectfully disagree with the rejection of these claims. Nevertheless, to advance prosecution of the present application, Applicants have amended these claims to more particularly

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and distinctly claim Applicants' invention. Applicants reserve the right to pursue Claims 7-8 in their original form in a continuing application.

As amended, Claim 7 now recites a load lock wherein the "first and second ports open into said first chamber when said elevator plate is in said second position." Wytman does not teach or suggest a load lock with the above noted limitations. Rather, in Wytman, the loading door 16 opens into a first chamber 12 while the valve 18 opens into the lower chamber 14. See Column 6, lines 2-11 and Figures 1-3. Moreover, because the sub-chamber 30 is moveable, it would not have been obvious to modify Wytman in such a manner. For at least this reason, Applicants respectfully submit that amended Claim 7 is in condition for allowance.

Claim 8 is also in condition for allowance because it depends from allowable Claim 7 and recites additional patentable subject matter.

C. Claims 15-17

In rejecting Claim 15, the Examiner admits that Wytman does not teach a load lock with a second elevator plate. Instead, the Examiner cites M.P.E.P. 2144.04 for the legal precedent that a reproduction of an apparatus component is obvious and concludes that adding a second elevator plate to Wytman would therefore be obvious. However, the second elevator plate is not a mere reproduction of an apparatus component because the second elevator plate has an entirely different function than the first elevator plate. Specifically, the first elevator plate substantially seals the auxiliary chamber from the first chamber when the wafer carrier is in a second position. In contrast, the second elevator plate closes the first port when the wafer carrier is in the inside position. "If the applicant has demonstrated the criticality of a specific limitation, it would not be appropriate to rely solely on case law as the rationale to support an obviousness rejection." M.P.E.P. 2144.04

Claims 16 and 17 are also in condition for allowance because they depend from allowable Claim 15 and recite additional patentable subject matter.

D. Claims 19 and 62 64

Claim 19 recites, in part, a load lock "wherein said auxiliary chamber includes inner walls that are adapted to withstand an auxiliary fluid and wherein said auxiliary fluid comprises HF vapor." In contrast, Wytman discloses a load lock, which is configured to heat and degas the wafer with an inert gas (e.g., Argon or Nitrogen). See Column 7, lines 50-60. Moreover, in